

Appl. No. : 09/993,024
Filed : November 13, 2001

AMENDMENTS TO THE CLAIMS

Please cancel Claims 12-14 and 16, as follows:

1. (Original) A process for depositing a dielectric material on a surface, comprising providing a chemical vapor deposition chamber having disposed therein a substrate;
introducing a gas comprised of a linear fluoroalkane having four or more carbon atoms to said chamber
introducing a suitable dopant source gas for providing the dielectric material with thermomechanical stability; and
depositing a doped fluorinated carbon film onto said substrate.
2. (Original) A process as claimed in Claim 1, wherein said doped fluorinated carbon film has a dielectric constant of about 2.5 or less.
3. (Original) A process as claimed in Claim 1, wherein said doped fluorinated carbon film has a dielectric constant of about 2.2 or less.
4. (Original) A process as claimed in Claim 1, wherein said linear fluoroalkane contains about 5 to about 9 carbon atoms.
5. (Original) A process as claimed in Claim 1, wherein said depositing is performed under plasma-enhanced chemical vapor deposition conditions.
6. (Original) A process as claimed in Claim 1, wherein said depositing is performed at a temperature of about 400°C or less in the presence of an *in-situ* plasma.
7. (Original) A process as claimed in Claim 1, wherein said depositing is performed under thermal chemical vapor deposition conditions by heating said substrate to a temperature in the range of about 300°C to about 500°C.
8. (Original) A process as claimed in Claim 1, wherein said dopant source gas further comprises a dopant selected from the group consisting of methyl silane, ethyl silane, dimethyl silane, diethylsilane, methyl germane, ethyl germane, dimethyl germane, diethylgermane, disilylmethane, silane, disilane, trisilane, germane, digermane, and mixtures thereof.
9. (Original) A process as claimed in Claim 1, wherein said gas further comprises an alkane having from 1 to 9 carbons.

Appl. No. : 09/993,024
Filed : November 13, 2001

10. (Original) A process as claimed in Claim 1, wherein said dopant source gas comprises methyl silane or methyl germane.

11. (Original) A process as claimed in Claim 1, wherein said doped fluorinated carbon film comprises $-(CF_2)_n$ - units linked to dopant molecules.

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. A process for depositing a dielectric material on a surface, comprising
providing a chemical vapor deposition chamber having disposed therein a substrate;

introducing a gas comprised of a linear fluoroalkane having four or more carbon atoms and a dopant source to said chamber;

creating a plasma within said chamber; and

depositing a doped fluorinated carbon film onto said substrate,

wherein said doped fluorinated carbon film has a dielectric constant of about 2.5 or less.

16. (Canceled)